BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE

STATE OF CALIFORNIA

In Attendance: PRESIDENT ALICE REYNOLDS
COMMISSIONER DARCIE L. HOUCK
COMMISSIONER CLIFFORD RECHTSCHAFFEN
COMMISSIONER GENEVIEVE SHIROMA
COMMISSIONER JOHN REYNOLDS

ADMINISTRATIVE LAW JUDGE KELLY A. HYMES, presiding

Order Instituting Rulemaking to Revisit Net Energy Metering Tariffs Pursuant to Decision 16-01-044, and to Address Other Issues Related to Net Energy Metering	ORAL ARGUMENT Rulemaking 20-08-020

REPORTERS' TRANSCRIPT
Virtual Proceeding
November 16, 2022
Pages 2205 - 2322
Volume 13

Reported by: Ashleigh E. Button, CSR No. 14013
Doris Huaman, CSR No. 10538
Andrea L. Ross, CSR No. 7896

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VIRTUAL PROCEEDING

NOVEMBER 16, 2022 - 10:11 A.M.

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ADMINISTRATIVE LAW JUDGE HYMES: The Commission will come to order. We will be on the record.

Good morning, everyone. Again, I am Kelly Hymes, the assigned administrative law judge to Rulemaking 20-08-020, the Rulemaking to Revisit Net Energy Metering Tariff Pursuant to Decision 16-01-044 and to address other issues related to net energy metering.

This is the time and place for parties to present oral arguments in this proceeding.

Pursuant to Commission Rules of Practice and Procedure Rule 13.14(b), in ratesetting proceedings in which the assigned Commissioner has determined that a hearing is required, a party has the right to make an oral argument before the Commission provided that that party makes such request by motion no later than the time for filing opening briefs. A quorum of the Commission shall be present.

On August 31, 2021, the California Solar and Storage Association and the Solar Energy Industry Association jointly with Vote

Solar requested oral argument in their opening briefs. On November 4, 2022, I issued a ruling noticing today's oral argument hearing and instructing parties to confirm their participation by sending an e-mail to me and identifying the name and contact information of a party representative.

On November 10, 2022, I sent a procedural e-mail confirming the list and order of speakers for today.

For the record, the order of party representatives participating today are as follows:

Carla Peterman for Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company, also referred to as the Three Large Investor-Owned Utilities;

We also have Susan Tierney for the Three Large Investor-Owned Utilities;

Claire Broome, for 350 Bay Area;

Ann Trowbridge for Agricultural Energy Consumers Association;

Andrew Gong for Aurora Solar;

Kevin Johnston for California Farm Bureau Federation;

Brad Heavner for California Solar

and Storage Association;

Nancy Rader for California Wind Energy Association;

Michael Boyd for Californians for Renewable Energy, Inc.;

Roger Lin for Center for Biological Diversity;

Ben Schwartz for Clean Coalition,

Rachael Koss for Coalition of California Utility Employees;

Raghu Belur for Enphase Energy;

Steve Sherr for Foundation Windpower;

Stephen Campbell for GRID Alternatives;

Scott Murtishaw for Independent Energy Producers Association;

Allie Detrio for Ivy Energy;

Mohit Chhabra for Natural Resources Defense Council;

Ellison Folk for Protect Our Communities Foundation;

Matt Baker for Public Advocates Office;

Katie Ramsey for Sierra Club;

Ariel Strauss for Small Business Utility Advocates;

Sean Gallagher for Solar Energy

Industries Association;

Matthew Freedman for The Utility Reform Network;

Sachu Constantine for Vote Solar;

Bill Allayaud for Environmental Working Group;

And Charles Adams for Albion Power Company.

For efficient use of our time, prior to going on the record today, a roll call was conducted and these representatives are present and ready to proceed. I remind these representatives that they each have two minutes and 30 seconds to provide their oral argument with the following exceptions:

San Diego Gas & Electric Company has ceded their time to Pacific Gas and Electric Company and Southern California Edison Company. Hence, the two representatives of the Large Investor-Owned Utilities will each have three minutes and 45 minutes to present.

Lastly, Environmental Working Group and Albion Power Company each responded late to my ruling, and, having showed good cause, I granted the two late requests; however, these parties will only have one minute and 15 seconds to speak.

Also for the record, pursuant to

Rule 13.14, the following Commissioners are present today: Assigned Commissioner President Alice Reynolds, Commissioner Darcie Houck, Commissioner Cliff Rechtschaffen, Commissioner John Reynolds, and Commissioner Genevieve Shiroma. Thus, we do have a quorum of Commissioners present.

Before we begin with oral argument, I understand that President Reynolds has opening remarks to make.

President Reynolds, you may proceed.

PRESIDENT REYNOLDS: Thank you, Judge Hymes, and good morning.

I'm pleased to welcome everyone to the oral argument today; welcome to the many parties who are participating and to the members of the public who are listening in.

I do want to make a few brief remarks. Net energy metering, or NEM, has had a long history in California from when it was first established in 1995 through the updates required by the legislation over the years, to the moment we find ourselves in today over 25 years later.

I want to be clear that we have carefully considered the evidence presented by the parties over the course of this proceeding to arrive at the element in the proposed decision issued last week by Judge Hymes.

The proposed decision would take us forward into a clean energy future. We all know that we need one that encourages electrification efforts such as installing heat pump water heaters and battery storage to support grid reliability during periods of peak demand and one that controls costs for all Californians.

The proposed decision would do this in three key ways; one, by applying high differential electrification rates to residential customers that install solar and solar paired with storage; two, by valuing export at the avoided cost calculator; and, three, by pairing this decision with a hundred million dollars in up-front incentives for new solar plus storage and stand-alone storage customers.

The proposed decision would also continue to promote rooftop solar adoption through a transitional mechanism called the ACC Plus that provides extra bill credits for customers that they can lock in for nine years.

The ACC Plus would be available to new solar customers for five years to allow the industry to transition to a marketplace that is centered on a solar plus battery storage sales model.

The proposed decision also advances equity in a few key ways. First, it provides over twice as many extra bill credits to customers enrolled in the CARE and FERA low-income assistance programs to ensure an equivalent pay-back period as all other customers.

Second, as I mentioned previously, the proposed decision would work in conjunction with an additional 900 million and up-front incentives from the general fund for residential customers that install battery storage. 70 percent of this funding is set aside for low-income customers.

And, third, the new net billing tariff by paying more -- by more accurately paying for the value of solar exports would control costs for customers who do not have solar on their homes. These customers are disproportionately lower income as many studies have shown.

With that said, I'm looking forward to hearing each party's constructive feedback on the specific elements of the proposed decision, and we will be taking this oral argument into consideration as we -- with an eye towards moving forward to a new future where distributed energy resources are better in line met with our critical climate and reliability goals and costs of this technology are more equitably re-allocated.

Last, I do want to note that I very much appreciate that we'll be hearing from a diverse set of parties here today from ratepayer advocates to solar industry representatives to customer and low-income groups. I look forward to the discussion today.

With that, thank you, and I will turn it back to Judge Hymes.

ALJ HYMES: Thank you, President Reynolds.

Once we begin oral arguments, we'll proceed through the list of party representatives. I'll introduce each speaker. Once you begin to speak, that's when your time begins, so please state your name and the name of the party you represent at the beginning of your remarks.

Given our time, I'm going to go ahead and proceed. Please speak clearly and slowly for the reporters.

First up we have Carla Peterman.

Please begin.

MS. PETERMAN: Hello, judge. Can you hear me through my headset?

ALJ HYMES: Yes.

MS. PETERMAN: Great. All right.

ARGUMENT BY MS. PETERMAN

Good morning. I am Carla Peterman. I am representing the Joint Utilities.

Thank you, Commissioners and Judge Hymes, for having us here today and for the CPUC's work on this proceeding. We agree with the PD's conclusion that NEM significantly and negatively impacts affordability for customers without rooftop solar and that the NEM cost shift discourages the adoption of electrification measures.

We are also pleased to see the PD's acknowledgment that NEM customers are not paying for their use of the grid. Your own studies found SDG&E residential NEM customers only pay nine percent of the cost deferred them.

A realtime example of the PD's NEM design leading to solar customers not supporting state policies is that NEM customers will underfund the EV incentive program the CPUC plans to vote on tomorrow as NEM customers, including NEM with storage, don't pay fully their fair share of public purpose program charges and the distribution component of the bill. Moving forward with a fixed charge will address that inequity and the PD should be revised to adopt a fixed charge immediately.

Solar corporations have already taken positions on the record in the demand flexibility rulemaking that the fixed charge should be optional for NEM customers and lower than the amount required to fully recover fixed costs.

If the Commission decides to defer the recovery of fixed costs to the demand flexibility rulemaking, it should clarify in this PD that rooftop solar customers will be required to take service on a rate that includes a fixed charge that fully recovers the cost of their use of the grid and their fair share of policy costs.

In addition to revising the PD to include a fixed charge or at minimum clarifies the application of the fixed charges to rooftop solar customers, I highlight three additional suggested changes.

First, the decision should be amended to require NEM1 and 2 customers to go onto a tariff with no subsidy after the legacy period ends. These customers will have more than recouped their investment, and it is unfair to require customers without rooftop solar to continue to subsidize NEM1 and 2 customers to the tune of billions of dollars a year well into the 2040s.

Second, the Commission should update the assumptions used in their calculation of the payback period and the export adder. The system size used for the calculation is about half the size of average installations that we see today, and the selected payback metric ignores rate increases.

Your own modeling shows nine years payback will in reality be a six-and-a-half year payback. Updating these assumptions will be consistent with what we are seeing today and will reduce or eliminate the need for an adder for higher income customers.

Third, the decision should be revised to ensure that the rooftop solar subsidy is transparent going forward. Specifically, the decision should require the utilities to report on the size of the NEM subsidy annually using the methodology used by the Commission in this decision. This information should be shared with customers and policy makers. Customers deserve to truly understand what is happening here.

The clock is ticking for reform. By the time we transition to the new tariff, the total NEM cost shift will likely exceed $5 billion. It was 3 billion when you started this proceeding. Let's not delay. Thank you for your time.

ALJ HYMES: Thank you.

Next up, we have Susan Tierney.

MS. TIERNEY: Good morning. Can you hear me?

ALJ HYMES: Yes. Please proceed.

ARGUMENT BY MS. TIERNEY

I am Sue Tierney from Analysis Group speaking on behalf of the Joint Utilities.

Thank you for holding this opportunity to speak today. Like Dr. Peterman, I know what it's like to sit in your shoes. In Massachusetts I was a utility Commissioner and an environmental cabinet officer. I was Assistant Secretary for Policy at the U.S. Department of Energy. I chair NREL's External Advisory Council, and I have worked for decades as a consultant around the country, a board member of many NGOs and on National Academy Studies, focusing on the transition to a more affordable, resilient, clean energy economy.

I know that California's 20 years of net metering have substantially contributed to the state's leadership in distributed energy. I congratulate you on the significant work reflected in this proceeding, and I want to make three points.

First, the extensive record in this docket and the PD findings recognize that it is time for a major change. The context for the Commission's decision has recently changed as well. In the past six months, California's legislature and congress have provided billions of dollars in financial incentives for consumers to adopt rooftop solar and storage.

The PD has rightly found that the magnitude and severity of the cost shift requires immediate action by the Commission and without changes, the financial burden of NEM is not sustainable and falls disproportionately on low-income consumers.

Second, while making that finding, this PD puts in place a perpetual cost shift when it should be putting in place a plan to sunset it. The estimated 2.5 billion per year of cost shift created when today's consumers transition to the net billing tariff will only grow over time.

The PD addresses this cost shift but it doesn't go far enough. The PD adopts a very long glide path at a time when immediate action is needed.

I encourage the Commission to lean on the expanded federal and state subsidies to support solar adoption, rather than further burdening electricity consumers. Doing that puts -- putting a burden on electricity consumers continues negative price pressure on electricity rates, which will make it harder for electrification goals to be accomplished.

Finally, this decision should give clear direction and recognize how the Demand Flexibility OIR will address the remaining cost shift. Although the PD points to that OIR and the need for a fixed charge to reduce the NEM subsidy, it is important to give that other proceeding stronger direction to ensure the intent of this PD with all of its record and that this -- these goals have been accomplished.

I encourage the Commission to take note of the recent decision of regulators in Hawaii to put in place a three-part electricity rate for all residential consumers, one that includes a fixed charge, a capacity charge tied to a customer's own electricity demand, and a time-of-use rate with a 3-to-1 difference between on- and off-peak rates.

Many other states around the country also recognize the need for reform. Thank you so much for this opportunity.]

ALJ HYMES: Thank you. Next up we have Claire Broome.

ARGUMENT BY MS. BROOME

Good morning, your Honor, Commissioners and colleagues. I'm Dr. Claire Broome representing 350 Bay Area. We advocate for the environment, environmental justice and ratepayers with a reach of 22,000 residents.

In the past five years, over half of California's solar PV has been installed on the distribution grid, one-third on residential rooftops. Compensating local solar appropriately is critical to meet our states's ambitious climate goals consistent with Energy Commission and CARB planning.

The new PD sets up a false dichotomy between the IOU definition of equity and the legal mandate to grow solar sustainably. Real equity starts with addressing the cost of energy itself. As the PD notes, California's high electricity rates are driven by increasing costs of transmission, distribution and wildfire issues. These costs are outside of scope, but sustaining solar is squarely within this proceeding, and solar plus storage can contain costs. Energy efficiency and rooftop solar in 2017 saved California ratepayers over 9 billion dollars for avoided transmission capital profits and maintenance costs. A model optimizing solar and storage on the distribution grid saves California 120 billion dollars by 2050 and decreases electricity rates. Low-income households spend a higher proportion of income on energy costs. So decreasing rates is a direct equity benefit. Real equity is best served by increasing solar and storage for all especially low-income households.

Whatever the decision, it is essential that a new tariff be monitored from the outset to keep customer solar installations on track to meet statewide planning. The proposed annual decreases in export compensation should not occur unless solar installations are growing sustainably.

Three to five years is way too long to wait to identify an excessive drop in installations. I'll close with the guidance we learned early in medical training: First, do no harm.

Thank you very much.

ALJ HYMES: Thank you.

Next up we have Ann Trowbridge.

ARGUMENT BY MS. TROWBRIDGE

Thank you, your Honor. Good morning, Commissioners. I'm Ann Trowbridge representing the Agricultural Energy Consumers Association or AECA.

AECA appreciates the effort that has been made to consider a wide range of viewpoints in developing a successful NEM program. NEM projects can play a key role in helping California meet its clean energy goals but only through a properly designed NEM program that encourages customer participation.

AECA supports the determination in the proposed decision, or PD, to maintain NEM 1 and 2 intact. Customers should be able to rely on the stability of the NEM structure in place when they decided to invest in solar generation.

AECA has significant concerns, however, regarding the reversal in treatment of nonresidential customers. The December

2021 PD would have adopted a successor NEM program for nonresidential customers that was largely the same as the current NEM 2.0 program. That result is consistent with the record in this proceeding.

The new PD would apply the new NEM program to both nonresidential and residential customers. The record does not support this result.

The PD correctly recognizes that the Lookback Study finds that the nonresidential customer segments of the NEM 2.0 tariff generally pass the TRC test and pay rates that fully covered their cost of services. Nonresidential NEM customers are also cost-effective under the PCT test.

Even though the PD says that it is not striving for perfection in one test but rather a balance of the value and tradeoffs between the tests, it seems unfortunately to disregard that statement by placing substantially more or possibly total emphasis on the RIM test's nonresidential results with minimal explanation to conclude that nonresidential customers under NEM 2.0 are not cost-effective.

This means that the new proposed decision will discourage agricultural customers who until now have actively invested in NEM systems from further participation at a time when all cost-effective clean energy resources should be encouraged.

AECA respectfully requests, based on the records in this proceeding, that the Commission adopt a successor NEM program for nonresidential RIM consumers that is largely unchanged from the current program.

Thank you. And we will be providing additional written comment.

ALJ HYMES: Thank you.

Next up we have Andrew Gong.

MR. GONG: Thank you, your Honor. Can you hear me --

ALJ HYMES: Yes, please proceed.

ARGUMENT BY MR. GONG

Okay. Great. This is Andrew Gong from Aurora Solar. Aurora Solar is a software company that provides tools that allow solar installers to design solar and storage systems, calculate bill savings and determine customers' financial outcomes.

Our interest in this proceeding, therefore, is to provide insight and feedback from a modeling perspective, whether the assumptions used in the models match up with industry data and if what's being required can be done.

Starting with the avoided-cost-calculator-based hourly export rate, to date, nearly all of the utilities have moved off of standard net metering, have either tied the export rate to the retail rates either through using a set reduction, a percentage cut or simply a flat export rate. These all have a fairly similar straightforward to model system, and these are also being used to explain to a prospective solar customer.

However, we are worried that explaining the proposed net billing tariff's 576 different hourly export rates, which will change every year, will take much longer than this 2-minute-and-30-second oral argument. While we can model this in our software if machine-readable export rate data is made available, we recommend a time-of-use export rate that follows the ACC instead of these hourly differential rates because difference in bill savings will be small. It's going to be time consuming to implement this new feature, and it will be confusing to the end customer.

In addition, owners of battery

systems are going to have a difficult time reprogramming this system to follow the new 576 values every time an update takes place.

Next, on the no netting or instantaneous netting, the hourly or 15-minute used -- netting system used in NEM 2 is a little bit easier to model. It's considerably more predictable and manageable both for prospective system owners and owners of existing solar plus storage systems. It doesn't make a significant difference in billing and will reduce the amount of re-implementation that solar installers have to do if we were to stay with hourly or 15-minute netting.

Now, if the Commission were to go with instantaneous netting, I'd like to note that the adjustment factor proposed in the PD is itself an average with a large standard deviation carrying its own uncertainty. We would prefer to continue to model bill savings with hourly netting, as supported by our testimony, and simply include language in the standardized bill document that explains the nuances of the bill savings estimate. This saves everyone a lot of effort and confusion.

Finally, turning to the CPUC's net

billing tariff's spreadsheet, there is some incorrect assumptions about system prices given recent inflation and the fact that large -- sorry -- small systems tend to have a much higher cost per watt.

Thank you.

ALJ HYMES: Thank you.

Next up is Kevin Johnson. Please proceed.

MR. JOHNSTON: Thank you, your Honor. Can you hear me okay?

ALJ HYMES: Yes.

ARGUMENT BY MR. JOHNSTON

Okay. Good morning. Thank you for the opportunity to speak today. My name is Kevin Johnston. I'm here on behalf of the California Farm Bureau Federation, the largest organization representing farmers and ranchers in California.

We are continuing to review the new proposed decision but would like to discuss two main points. One is the treatment of nonresidential NEM 1.0 and 2.0 customers and two, the analysis of nonresidential customer cost-effectiveness.

First, we are pleased to see the new PD has made changes and will leave NEM 1.0 and 2.0 customers unharmed. This change recognizes the significant investments Farm Bureau members have made in choosing to participate in the NEM program and honors the commitment the Commission made to those customers in prior NEM decisions.

Unfortunately, our second point is similar to our concerns with the original proposed decision. The proceeding in both proposed decisions rely on predominantly residential analysis and almost exclusively residential proposals to make conclusions and decisions for nonresidential customers. The PD claims each test should be looked at holistically and no single test a trump card, but the nonresidential RIM score becomes the single justification for nonresidential changes despite positive results in the other tests and overwhelming data regarding nonresidential payment for cost of services.

The argument hinges on the unsubstantiated fear that a change in demand charges or high fixed charges in another proceeding could lead to the reductions in the nonresidential payments for cost of service, which I'll add has always been over a hundred percent under nonresidential NEM 1.0 and 2.0 customers. I simply ask the Commission whether they have received any indication from the utilities that demand charges will be done away with and who makes the final determination on whether or not new rate structures go into place. Frankly, it is a simplistic justification to lump all customers under one tariff.

The PD is also severely lacking in its analysis of the NEMA program. As we have previously cautioned, NEMA is not NEM. Customers are treated differently, and the NEMA subtariff was designed with the basis of covering its cost of services in mind and is deserving of a thoughtful, individual analysis before changes are made.

As we have previously stated, why not just leave nonresidential alone for now? We're not opposed to tweaks, but to subject nonresidential customers to changes based on residential results lacks the nuance and care that should be expected in such an important decision. The record supports not making changes to nonresidential customers, and the second track, a different proceeding, could take a more careful and nuanced approach nonresidential customers deserve.

Thank you.

ALJ HYMES: Thank you.

Next up we have Brad Heavner.

ARGUMENT BY MR. HEAVNER

Thank you. Brad Heavner with the California Solar and Storage Association.

We are certainly glad that the PD has come down to earth. For too long we've been debating solar-specific fees which are not components of net metering and were not based on cost causation. The PD does not fully characterize our legal arguments on solar fees, but we can let that go. The PD is now focused on the value of exported energy, which should have been the whole conversation all along.

Commissioners, I hope you respect the fact that the solar industry is onboard with going to a set of export values far lower than they are now, nearly doing away with daytime export credits. It is not easy for us to support that, but we do. However, making that change too quickly will do too much damage.

The PD is still built on a fictional average cost of solar and storage. It basically says solar in California will not be viable unless providers can drop their prices overnight. That would not cause prices to go down. It would cause them to go up. If you want prices to go down, keep workers busy so they are efficient and competitive. If there are firings and business closures and disruption, we will lose efficiency and lose highly trained people.

Excluding medium and large commercial customers and agricultural customers from the ACC plus adders is not based on factual information. The E3 model that the PD is based on does not include analysis of any customers with demand charges. This is a really stunning gap. The analysis is only relevant to small commercial customers who are more like residential customers than medium commercial. You can't conclude that the commercial market won't be devastated in the absence of any analysis and without reference to information that is on the record on large commercial. At the very least, the adders should apply to commercial projects.

For low-income customers, we absolutely support the equity fund, but that will likely only fund 15- to 30,000 systems. We need viable adoption for moderate-income customers without an outside cash incentive. For that, most importantly, the adder must be higher. We all know that interest rates have soared recently, and that makes it harder for low- and moderate-income customers who rely on financing. Please keep this in mind both for CARE customers and for low- and moderate-income customers who are above that threshold. A glidepath based on a nine-year simple payback is not sufficient for customers to achieve savings that exceed loan payments. A glidepath based on a seven-year simple payback would create savings from a loan.

Thank you very much.

ALJ HYMES: Thank you.

Next up we have Nancy Rader.

ARGUMENT BY MS. RADER

Good morning. This is Nancy Rader of the California Wind Energy Association.

Over the past few years, we've experienced the challenge of maintaining reliability while striving to meet our clean energy targets. And the more clean energy capacity and transmission we have to build, the harder it will be to meet those twin goals.

Rooftop solar advocates often suggest that high levels of residential rooftop solar will ease that challenge and that, therefore, we must continue high rooftop solar growth rates despite the high cost. But that argument is not supported by any evidence in this proceeding. In fact, CalWEA provided evidence to the contrary. We show that adding too much rooftop solar actually increases the need for utility sales capacity and related transmission and therefore increases our challenges. That seems counterintuitive. So I will explain.

CalWEA simply changed two assumptions in the Commission's IRP model that was used to develop the resource portfolio in the SB 100 Joint Agency Report. We reduced by half the 31 gigawatts of new rooftop solar that was hardwired into the model, and we held the level of greenhouse gasses constant. Then we let the model run. Unsurprisingly, the results show that rooftop -- reducing rooftop solar by half would save at least a billion dollars each year. But surprisingly, the results also show that we would need less utility-scale capacity because we rely more on geothermal and wind energy and less on rooftop and utility-scale solar. Geothermal and wind have higher capacity factors, so less capacity is needed overall.

In addition, the model showed we

would reduce the need for storage by 7 gigawatts since we would have less solar to manage. Less capacity means lower associated land-use requirements and transmission. This evidence was presented in CalWEA's testimony and was not refuted.

A 5 billion dollar annual cost shift that benefits a subset of customers is not equitable or affordable. It's also likely to increase the need for utility-scale resources and thereby increase our twin challenges of maintaining reliability while reducing carbon emissions.

So please don't be persuaded by claims that the modest proposed reduction in compensation for rooftop solar is bad for California's climate goals. In fact, the opposite is true.

While the PD is an improvement over current policies, the Commission should further reduce the cost shift to promote rate affordability and achievement of our clean energy goals.

Thank you.

ALJ HYMES: Thank you.

Michael Boyd, please.

(No response.)

ALJ HYMES: Mr. Boyd?

(No response.)

ALJ HYMES: May I ask if -- let's go off the record.

(Off the record.)

ALJ HYMES: Let's go back on the record.

Roger Lin, please.

ARGUMENT BY MR. LIN

Thank you, your Honor. Roger Lin with Center for Biological Diversity.

I want to talk about equity and specifically four elements from the ESJ Action Plan. First, the Commission should use the plan's definition of low-income.

Working-class Californians represent the largest demographic that installed rooftop solar in 2021. To ensure -- to ensure the sustainable growth of the program, we have to look forward, and the ESJ definition of low-income can target this segment of the population and get us closer to our climate goals.

It is critical to design a NEM program for the grid of the future with intentional and targeted policies that are not locked into findings of the past.

Second, non-energy benefits. Including land-use impacts, local air quality and public health, avoided fossil fuel infrastructure and reliability or resiliency. The microgrid proceeding is developing a value for resiliency, and the CEC has already begun work on non-energy benefits for the IEPR and the SB 100 Joint Agency Report. Contrary to the PD, the burden should not be on the parties to provide evidence of these values. The ESJ Action Plan has identified the need to consider non-energy benefits, which is also a principal recommendation from the Barriers Study and the charter of the DAC Advisory Group. This work is long overdue.

The ACC and cost-effectiveness tests cannot adequately consider these benefits. The record includes substantial evidence of the many DAC and ESJ benefits missing from the cost-shift analysis. The En Banc Affordability Papers even acknowledged the need for further work to determine the extent or even existence of the cost shift for BTM resources.

Third, barriers. The prior equity fund implemented in collaboration with environmental justice stakeholders could holistically address barriers to greater clean energy deployment but legislative direction for the SGIP funds cannot.

Related, one significant barrier is the difficulty in understanding program requirements, especially a lack of certainty in regard to bill savings which the PD presents.

And a final point: Procedural justice. The PD defers full consideration of several issues to other proceedings or processes, making it next to impossible for EJ advocates to adequately participate. We should not determine new program rules and requirements without all of the facts at hand and informed by the proper advocates. The Commission must ensure that those voices are adequately represented and not experiment with apparent short-term course correction safeguards that can have long-term implications for the sustained growth of rooftop solar, especially in DAC and other ESJ communities.

Thank you for your time.]

ALJ HYMES: Thank you. Next up, we have Ben Schwartz, please.

ARGUMENT BY MR. SCHWARTZ

Good morning and thank you for the opportunity to speak today.

My name is Ben Schwartz, policy manager for the Clean Coalition. While the

Clean Coalition appreciates that the grid participation charge and any form of transmission access charges have been removed from the proposed decision, we also believe that there should be no fixed fees entrenched in rates that NEM customers will be required to transition to. Specific fees for customers adopting -- adopting electrification measures are punitive for ratepayers helping California on a pathway to achieve climate goals. Instead, there should be greater time-varying rates to promote usage during non-peak times.

The PD still sends a negative price signal to consumers at a time when the pace of solar adoption needs to increase to achieve electrification goals. The proposed decision is incongruous with the high cost of living in California, inflation, skyrocketing electric rates, supply chain issues, and does not effectively incentivize greater deployment in key communities. As is, it will not lead to sustainable growth of renewable resources.

The first concern is that basing the successor tariff on a flawed lookback study is bad policy. Fixing the cost shifts has become -- become one of the essential concerns of the net-billing tariff despite 16 state-level studies and a national study of 20 - of 43 net metering policies, which found no cost shift particularly when solar penetration is under 10 percent.

The cost shift argument overstates NEM costs such as including a loss of sales to the utilities as a cost, while ignoring NEM benefits, such as societal benefits or non-energy benefits. Value from NEM 1 and NEM 2 customers pushing back the peak period and value from fostering electrification.

Second, using an unfinished avoided cost calculator will result in lower rates being locked in for NEM customers. Locking in avoided cost export rates is a mistake considering that the avoided cost calculator is an unfinished document. For example, the 2022, ACC approves a specific avoided transmission value for PG&E but waits to do so for SCE and SDG&E until the methodology is finished. Moreover, unspecified avoided transmission is also not yet valued in the calculator meaning that over time it will change and include more values.

This proposed decision specifically disincentivizes deployments in key communities rather than incentivizing them at the --

(Timer notification.)

MR. SCHWARTZ: -- the rate that California...

ALJ HYMES: Thank you.

Next is Rachael Koss.

ARGUMENT BY MS. KOSS

Rachael Koss for the Coalition of California Utility Employees. I have three points.

First, after the original PD, the solar industry called the participation charge a solar tax. There is no solar tax levied on solar customers. Not from the original PD. Not from this PD. The fact is people without solar pay a hidden tax to prop up the rooftop solar industry.

In 2022, that tax was $4.6 billion, and it increases by $1 billion every year under the current system. The PD does nothing to keep the tax imposed by current solar customers from growing as rates increase.

The tax from new solar customers will be a bit less under this PD than under NEM 2.0, but not much. The tax caused by new solar customers come from, one, eight or nine cents per kilowatt-hour export rate, which is the ACC plus a subsidy, which is almost triple the three cents we pay for large scale solar plus storage, but the rooftop solar industry complains it's not enough. Two, the fact that customers will mostly self-consume their generation, especially if they have batteries, which means that they'll be compensated at the full retail great; and three, because the PD eliminates the participation charge, rooftop solar customers pay nothing for the grid that they use every second of every day. There is still a gigantic cost shift under this PD.

A solar customer's entire investment will be paid back in less than 10 years. The next 10-plus years is just free money from non-solar customers. This is a phenomenally generous PD, and they complain it's not enough.

This PD continues a huge handout to an insatiable industry. Do not let them tell you this is unfair or deprives people of solar. Second, the industry's framing of this as good solar versus bad monopoly utilities is totally untrue. You know utilities don't make a single penny based on the amount of commodity they sell. Their revenue requirement doesn't get bigger or smaller depending on how much rooftop solar installations they are. The only profits at stake are the profits of the rooftop solar industry.

Finally, the rooftop solar industry cries this will cost thousands of jobs. This isn't going to shrink the solar industry. That's all in the record, and even if it did, those jobs are low paid with little benefits and no career future; and they take away from good union jobs installing low cost, large-scale solar and storage. We can build 10 times as much capacity for the same price as large-scale solar and storage.

The bottom line is rooftop solar is expensive with bad jobs, and large-scale solar is cheap with good jobs.

Thank you.

ALJ HYMES: Thank you. Next, we have Raghu Belur.

ARGUMENT BY MR. BELUR

Good morning. Can you hear me clearly?

ALJ HYMES: Yes. Please proceed.

MR. BELUR: Great. My name is Raghu Belur. I am the co-founder and chief products officer for Enphase Energy. We are an S&P company and been recently selected to be part of the NASDAQ-100.

I started Enphase in California in 2006, and I have had a front row seat to the rapid evolution of our industry. We need policy that simultaneously benefits consumers, power providers and industry, which the CPUC's push towards whole-home electrification aims to achieve. I would like to thank the CPUC, Governor Newsom's office and our industry for working collaborately -- collaboratively to achieve this -- to try and achieve this goal.

To continue to evolve, we must transition to solar plus storage in a manner is not disruptive. The revised PD has been a substantial step in the right direction. Eliminating the GPC, restoring NEM -- NEM contracts and increasing the size of solar. That is all great; however, I am concerned by the lack of transition period.

We can seriously impede the goals of the PD if we cut solar deployment so abruptly that it slows down the adoption of storage, EVs and heat-pumps. That would be a big loss.

I also caution against an abrupt transition while state policy is still in flux. The CPUC has put the right pieces in place with new SGIP funding, regulatory proceedings to expand demand flexibility and forge a high-DER future, and resiliency programs to deploy these systems to benefit the grid. However, there is much more work to be done. SGIP funding will not be available for months, and we don't know what the requirements will be, the demand flexibility and the high-DER future proceedings have only been recently launched and policy frameworks haven't been established, and the ELRP has only one season under its belt.

While we must use NEM 3 to spur on a storage transition, we should do so on a timeline commensurate with the state's policies designed to support it. All these pieces need to work in concert to create a sustainable DER market. Therefore, the CPUC should use its ACC plus to create a brief transition period. The CPUC estimated last year that the current simple payback is 4.1 years, so immediately jumping to a 9-year payback is too jarring for the industry. Rather, it should set its year one adder to achieve a 7-year payback and year two adder to achieve an 8-year payback before transitioning to its 9-year payback adder.

This could stabilize the solar market in the near term while providing the storage market and state policy more time to mature.

The rest of the country follows California's lead on clear energy, and we collectively bear those responsibilities.

Enphase is committed to carrying on our evolution to help consumers, power providers and our industry combat climate change and create a more resilient grid.

Thank you.

ALJ HYMES: Thank you.

Next up is Steve Sherr, and I just want to remind everyone to please speak slowly for the reporters. Thank you.

Mr. Sherr?

ARGUMENT BY MR. SHERR

Good morning, Judge Hymes, Commissioners and colleagues. We appreciate and understand the focus of this proceeding on solar and storage -- and I should say I am Steven Sherr from Foundation Windpower.

Our -- our small company develops, owns and operates wind energy system sized between one and six megawatts located behind the meter at medium to large commercial, and in industrial and agricultural consumers across the state of California.

At the outset, it is important to emphasize that we support and wish to amplify everything that has been said today by the Agricultural Energy Consumers Association and the California Farm Bureau Federation who acknowledge and recognize and hope that the Commission will see clear to distinguishing nonresidential customers to residential customers. In addition to that, though, I would add that by every measure under the standard-practice manual, including the ratepayer impact measure or RIM, wind energy behind the meter at these consumers is extremely cost effective. It would be self-defeating by ever measure of the goals of this proceeding to do anything to disincentivize the deployment of wind energy behind the meter; and why is that?

First and foremost, wind energy produces at precisely the time consumers, the grid and all of us need energy the most, in the late afternoon and evening peak periods.

Second, these consumers pay 100 percent of their interconnection costs. Sometimes those are substantial grid-hardening interconnection costs, and anything that is sized over one megawatt has to bear its on freight on interconnection.

And, like other commercial consumers, these wind energy customers also pay demand charges.

Now, we understand that there is a reluctance to carve out -- I think the word is from the proposed decision -- particular technologies. But at the end of the day, the guiding principle D of this proceeding tells us that we must consider all technologies fairly, and AB 327 does not prohibit this Commission from making a decision that is tailored to the technologies that are available us -- available to us today.

We will submit written comments suggesting specific revisions, but we do hope that the benefits of wind energy in nonresidential settings is not lost in the shuffle.

Thank you very much.

ALJ HYMES: Thank you. Next up is Stephen Campbell.

ARGUMENT BY MR. CAMPBELL

Can you hear me okay?

ALJ HYMES: Yes. Please proceed.

MR. CAMPBELL: Thank you.

ALJ Hynes, Commissioners and fellow attendees. Steve Campbell, GRID Alternatives.

GRID Alternatives envisions a rapid, equitable transition to a world powered by renewable energy. My job in this proceeding is to advocate for policy that enables environmental and social justice communities to benefit from the successor tariff. I've constantly thought about all ratepayers, most having no idea this proceeding is even happening; would they want to participate in and benefit from local, distributed and resilient clean energy, and my answer was always a resounding yes.

Each time I may have waivered in that determination after listening to honest and logical points from another stakeholder, I found overwhelming support for it when I spoke with internal GRID staff serving low-income communities across the state; when I spoke with nonprofit affordable housing developers, small community-based organizations, and other low-income advocacy organizations like the California Low Income Consumers Coalition. Thankfully, the PD dispensed of a one-sided equity argument and noted "that the equity issue cannot be addressed solely by reducing the cost shift. Disadvantaged communities should not continue to be left behind with respect to clean energy options, including electrification and storage. The successor tariff will address the equity issue by working to ensure increased participation by disadvantaged communities."

Right now, we don't believe the PD is set to increase participation -- excuse me. To do so, GRID will propose the following revisions to the PD so a rapid, equitable transition to renewable energy can benefit everyone.

First, the installed cost of solar for low-income is demonstratedly too low. Once accurate dollar-to-watt forecast is used, the ESJ adder would be adjusted up. This is critical.

The Commission should really be including all members of the ESJ communities, including households with annual incomes at or below 80 percent AMI to be eligible for the sub tariff. Right now, the PD determines sub tariff eligibility is CARE and FERA eligible, no more tribes. Obviously, it needs to include tribes and households with incomes at or below 80 percent AMI.

Third, the AB 209 lower-income incentive monies does not equal an equity fund. First, as referenced in the PD, AB 209 funding is "subject to future legislative appropriation." That is a known unknown. Second, AB 209 is a market transmission program, and market transmissions programs were not meant to overcome many other known barriers. Lastly, to help address this uncertainty, we recommend holding the ACCs plus flat --

(Timer notification.)

MR. CAMPBELL: -- no step downs for all ESJ customers for five years.

ALJ HYMES: Thank you.

Next, we have Scott Murtishaw.

ARGUMENT BY MR. MURTISHAW

Good morning, can you hear me?

ALJ HYMES: Yes. Please proceed.

MR. MURTISHAW: All right.

Good morning, Commissioners. I am Scott Murtishaw with the Independent Energy Producers, and I will start with a political truism: It's way harder to end a subsidy than to create it. Subsidies are sticky. They concentrate benefits on the few who then fight mightily to resist proposed reforms. And NEM is an enormous cost subsidy benefiting homeowners who have the means to install solar and harming those who do not. The PD does not go far enough to rectify this inequity.

Under the PD, every new solar system installed will make a non-solar customer substantially worse off. Appendix B of the PD shows that non-solar customers will receive only 23 to 37 cents of value for every dollar they transfer to solar customers, but solar customers will reap benefits of up to $2.50 for every dollar they invest in their solar system. This is simply a wealth transfer from non-solar ratepayers to those with the wherewithal to install solar. Why is this remotely acceptable?

Large-scale renewables are a much cheaper alternative. The latest RPS annual report shows that 2021 renewable contracts cost only 2 cents per kilowatt hour, a lower cost resource benefiting all customers. The solar parties estimated the transmission cost to deliver this electricity at 3 cents per kilowatt hour. That's an all-in cost of 5 cents, and that is the benchmark that rooftop solar should meet.

The proposed export compensation rate does bring export compensation closer to parity with the large-scale renewables, but a sizeable cost shift remains.

When solar generation used onsite

provides bill savings greater than utilities' avoided costs, the difference must be recouped from other customers to pay for fixed costs and social programs. This is not debatable.

Under the utilities' EV tariffs, non-solar customers will effectively pay solar customers 15 to 55 cents in excess costs for every kilowatt hour due to the huge gap between customer savings and avoided costs. The Commission should reinstate a grid charge to further reduce this cost shift.

Solar advocates claim that we need rooftop solar to meet our climate goals. Not true. Senate Bill 1020, signed this year, requires utilities and CCAs to be 90 percent GHG-free by 2035 and 100 percent by 2045.

The electricity sector will rapidly decarbonize over the next decade with or without rooftop solar, but we can do so at a far lower cost with a more rational mix of large-scale and rooftop renewables.

Thank you.

ALJ HYMES: Thank you. I understand Mr. Boyd has -- we have corrected those difficulties.

Mr. Boyd?

ARGUMENT BY MR. BOYD

Yes, can you hear me?

ALJ HYMES: Yes.

MR. BOYD: Okay. Go ahead?

ALJ HYMES: Yes, please proceed.

MR. BOYD: Good morning. I am Michael Boyd, president of Californians for Renewable Energy, Inc.

We feel uncomfortable with the proposal to use the Commission's avoided cost calculator instead of full avoided cost under the Public Utility Regulatory Policies Act, or P-U-R -- P-U-R-P-A is the acronym, and I will call it PURPA.

We feel uncomfortable with the proposal to measure our contributions to the RPS at utility's meter instead of measuring at the solar inverter's AC output.

By measuring at the utility's meter, this allows the IOU to receive the best benefits of actual solar being produced for free. This is what happens when you mix retail imports with wholesale exports.

I am requesting that an alternative proposed decision be offered up that provides customer generators compensation for all the renewable emergency they produce as measured at the AC output of their inverter connected to their solar panel, and I request compensation at full avoided cost under the -- under PURPA.

The Western Energy Generation Information System -- that is acronym W-R-E-G-I-A or WREGIS -- is part of the Electric Coordinating Council, which has been approved by the Federal Energy Regulatory Commission as the regional entity for the western interconnection, which promotes bulk power system reliability and security in the western interconnection.

CARE has a business account with WREGIS, and my 5.2 kilowatts PV solar system is a generating unit. My solar power inverter's AC output is connected to a revenue-grade meter approved by WREGIS. The meter was interconnected on July 1st, and after November 1st, it recorded one megawatt-hour of solar power was produced. WREGIS issued me a certificate for one renewable energy credit or REC. This REC is tradeable to PG&E.

I produced the one megawatt in a four-month period. If we normalize that one megawatt-hour to roughly 13,000 megawatts --

(Timer notification.)

MR. BOYD: -- megawatts of rooftop

solar that is interconnected statewide, then there was two and a half trillion watts of solar power produced in four months that wasn't counted towards the state's RPS. That's 7.5 terawatts annually not being counted in the RPS, and that is -- is a free uncompensated benefit to the utilities.]

ALJ HYMES: Mr. Boyd, your time is up. Thank you.

Next is Allie Detrio.

MS. DETRIO: Hello. Can you hear me?

ALJ HYMES: Yes, please proceed.

ARGUMENT BY MS. DETRIO

Hello, Commissioners. My name is Allie Detrio here on behalf of Ivy Energy.

Ivy has been advocating for multifamily solar and maintaining a workable VNEM tariff for apartments and renters throughout this proceeding.

Ivy is thankful for many of the changes in this PD, including that the CPUC has acknowledged that on-site load is being served by VNEM systems and maintains existing netting intervals. We request that the final decision clarify that netting should be maintained -- should be measured at the parcel level to facilitate better storage pairing options in the transition.

VNEM was not analyzed in the Lookback Study, as we noted multiple times in our testimony. We have concerns that the analysis and questionable assumptions on VNEM in Appendix B of the recent PD are not in the record and inaccurately portray savings and payback periods, which is further compounded with uncertainty with future labor costs.

The questionable analysis results in the PD not extending the ACC Plus adder, or glide path, to multifamily VNEM systems. VNEM should also have a glide path.

There is a lack of acknowledgment within the PD about the equity benefits of maintaining a strong VNEM for renters who do not own their homes. Ivy has provided data and studies on the record about renter demographics and statistics to show how reaching non-homeowner renters would achieve equity in this program.

Renters are overwhelmingly low-income people of color and they are the nonparticipating ratepayers in NEM. We should be expanding, not constricting, VNEM. As our testimony states, based on the number of customers and meters served by a single service delivery point with VNEM, it's entirely possible that multifamily buildings are paying more than their cost of service. None of that was analyzed in the Lookback Study or throughout this proceeding.

Ivy still believes that VNEM 2.0 should be maintained like the low-income VNEM SOMAH tariff until multifamily buildings can be analyzed as their own customer class as an intentional policy decision to promote equity and environmental justice through improved renter access to clean energy.

If the PUC does not maintain VNEM for renters, the Commission should make the following changes for the final decision:

Remove the assumptions on VNEM in Appendix B as they were not analyzed or discussed on the record.

The VNEM successor tariff should be placed -- should be based on ACC Plus values for exports in line with the net billing tariff.

Multifamily apartments under VNEM should get the glide path adder to facilitate a smooth transition to successor.

The PD should clarify that netting in a VNEM will be measured at the parcel level --

(Timer notification.)

MS. DETRIO: Ivy's data on equity and

renter demographics should be acknowledged on the record. Renters are overwhelmingly low-income communities of color, and these are the disadvantaged communities that the Commission should be trying to help in the final decision with VNEM. Thank you very much.

ALJ HYMES: Thank you.

Next we have me Mohit Chhabra.

MR. CHHABRA: Good morning. Can you hear me?

ALJ HYMES: Yes. Please proceed.

ARGUMENT BY MR. CHHABRA

I, Mohit Chhabra, represent NRDC, an international environmental organization that develops and promotes policies to decarbonize our economy affordably, equitably, and in an environmentally sound manner. Rooftop solar is critical to this.

NRDC's work in this proceeding reflects California's unique situation. We want to ensure that distributed clean energy grows sustainably, mitigate costs of NEM for those without solar, and make distributed clean energy more accessible to lower income customers.

Since 2010, PV production costs have plummeted, retail rates at which California's solar customers are compensated have skyrocketed. It is this situation that's helped build a vibrant rooftop solar industry. California now has over a million solar roofs. Rooftop and supply side solar have driven down wholesale electricity; prices. This is a success story.

However, retail rates have far outgrown the value of clean distributed energy. NEM's annual costs are now $4 billion more than its benefits even after accounting for the clean and distributed value of solar. This raises rates for all. High rates and bills hamper our decarbonization goals by making it harder for Californians to adopt clean electric cars and appliances. They also further burden the most vulnerable.

NEM needs to evolve to align with grid needs, policy goals, and grow sustainably for all.

This PD recognizes that NEM sits on the shoulders of retail rate design. It does not institute specific charges to ensure that solar customers contribute their share of costs of the grid and policy mandates funded through electric bills. It updates the export compensation to align with the value of distributed clean energy. This is a good step toward addressing NEM's affordability concerns. The PD also recommends modernizing electric rates for all customers. This is the appropriate long-term solution.

The proposed tariff encourages solar adoption and use in line with our needs and policy goals. It makes solar more accessible to lower income households by paying more for exports retaining the equity fund and concessions for income-qualified housing.

On balance, NRDC supports this revised proposed decision. We appreciate the Commission's efforts to achieve a balanced and effective solution. Thank you.

ALJ HYMES: Thank you.

Next up is Ellison Folk.

Ms. Folk, are you -- yes.

ARGUMENT BY MS. FOLK

Good morning. Ellison Folk on behalf of Protect Our Communities Association.

I'd like to start by acknowledging that the revised proposed decision is better, but comparison to the prior decision is not the relevant legal standard. Rather, the Commission must ensure that the successor tariff complies with state law.

The Public Utilities Code directs the Commission to ensure that any NEM tariff is based on the cost and benefit for behind-the-meter resources, but the proposed decision underestimates both of these. It underestimates the benefits and it overstates their costs.

First, when looking at cost, the decision is driven by the false narrative that behind-the-meter resources cause a massive cost shift between participants and nonparticipants. The PD does this by using customer bill savings to measure the costs of behind-the-meter resources, but this makes no sense from a legal or policy perspective.

The amount of money that customers save by reducing the use of energy from the grid is not a measure of that customer's cost. If that were true, we would calculate the cost of energy efficiency measures by looking at how much customers save when they are installed. But PUC precedent is clear that we should not measure the cost of actions that reduce energy by looking at how much money the customers saves.

On the benefit side, the proposed decision continues to rely on the avoided cost calculator to measure the benefits of behind-the-meter resources, but the calculator substantially underestimates avoided transmission costs.

For example, the calculator assumes only $482 million in capacity-related transmission projects for all three utilities between 2020 and 2025. However, this is only a small fraction of the actual transmission costs. In the proceeding on utility costs and the affordability of the grid, PUC staff reported that transmission-related revenue requirements for the utilities in 2021 alone exceeded $4 billion. There's a real disconnect between the calculator's estimates of transmission costs and those estimated by PUC staff.

This is a huge omission. If we underestimate transmission costs, we underestimate the value of behind-the-meter resources to reduce those costs.

Because it continues to rely on inaccurate metrics, the PD ties itself in knots trying to justify the new tariff.

The Commission does not have to throw out the prior precedent or completely ignore tools like the avoided cost calculator. But to comply with the statutory mandate, the PD must be revised to acknowledge the shortcomings of these tools for the purposes --

(Timer notification.)

MS. FOLK: -- of assessing costs and benefits in this proceeding. Thank you.

ALJ HYMES: Thank you.

Next is Matt Baker.

MR. BAKER: Can you hear me, your Honor?

ALJ HYMES: Yes. Please proceed.

ARGUMENT BY MR. BAKER

Your Honor and Commissioners, I'm Matt Baker. I'm director of the Office of Public Advocate, and I have three points to make.

One, the proposed decision acknowledges net energy metering is inequitable and needs reforms. Our rate increases continue to outpace inflation, and this puts our decarbonization goals at risk. NEM is one of the three main drivers of these rate increases.

I think the proposed decision says it best, quote:

> The financial burden on the shrinking pool of nonparticipants is unsustainable and will fall disproportionately on lower-income customers.

Number two, the proposed decision improves the existing structure. It will reduce the cost shift from new solar customers by about $1.8 billion a year by 2030. It does this through two main reforms, first the transition to compensating exports based on the avoided cost calculator, and it requires new participants to be on rate plans that better align grid costs and customer bills. This is crucial if we're going to succeed in electrifying our economy.

With these improvements, the proposed glide path, the expanded federal incentives, and unfortunately increasing utility rates, the PD will provide new solar customers with roughly the same payback on solar investments that current customers have today.

My final point is that the Commission must find ways to address legacy NEM costs and equitable ways to recover fixed costs. Looking towards 2030, the cost to nonparticipants under the new PD are still expected to increase by $2.8 billion a year to $7.6 billion. This is largely the result of subsidies to current customers.

Equitable solutions exist. We must move quickly on income-based fixed charges, and the Commission should consider further incentives to move current customers to the successor tariffs and install storage.

We estimate that providing all current NEM customers with a 30 percent cash rebate for add-on storage systems would cost $4.3 billion, but it would save ratepayers a net of $11.5 billion over 10 years.

You need a grid that is clean and that can electrify our economy. To get there, we must find ways to put downward pressure on rates. This decision is a step in the right decision, but we need to do more. Thank you.

ALJ HYMES: Thank you.

Next is Katie Ramsey.

MS. RAMSEY: Thank you, your Honor. Confirming that you can hear me.

ALJ HYMES: Yes.

ARGUMENT BY MS. RAMSEY

Thank you. I'm Katie Ramsey speaking on behalf of Sierra Club.

Our climate targets do depend on rooftop solar. To meet the targets in the draft CARB Scoping Plan, we need to exceed our best year of solar deployment by 60 percent and sustain that pace for the next decade. Rooftop solar can and must play a part of that deployment.

The PD is a considerable improvement from the prior PD, but two key changes are still needed. First, the glide path needs to be more gradual and step-downs need to be based on installed capacity instead of time.

NEM reform in other states shows that you can maintain steady solar deployments by reducing solar export values with gradual and predictable step-downs. States that made drastic and immediate cuts saw massive layoffs and crashes in solar deployments.

The PD's glide path doesn't accomplish what we need to for two reasons. First, it's more like a cliff than a path and drops the export value too drastically on day one to allow the industry to adapt.

Second, the step-downs are based on time rather than installed capacity. Sierra Club continues to recommend that the Commission decrease the export value with capacity-based step-downs instead of time-based step-downs. Decreasing the export value with each gigawatt of installed solar would protect against undervaluing solar and would ensure that the decreases are not more drastic than the industry can bear.

The second point or recommendation is to move existing NEM customers to electrification rates five years after interconnection. The PD places too many cost saving measures on new solar customers without making any changes for existing customers. This is an avoidable mistake.

Moving existing customers to electrification rates is consistent with Commission precedent, and the NEM handbook sets expectations by telling customers that their underlying rate may change. This change would also send current NEM customers a price signal to conserve energy during peak periods.

This past summer the state went to exceptional lengths to maintain grid reliability, suspending air permits, paying diesel backup generators to run, and calling on customers to voluntarily conserve. And yet, existing NEM customers currently have either a weak or nonexistent price signal to conserve during those hours.

The change would still provide bill savings to existing customers that electrify, so we urge the commission to take a second look at that proposal. Thank you.

ALJ HYMES: Thank you.

Next is Ariel Strauss.

MR. STRAUSS: Judge Hymes, this is Ariel Strauss for Small Business Utility Advocates. Am I coming in clear?

ALJ HYMES: Yes. We can hear you. Please proceed.

MR. STRAUSS: Thank you.

ARGUMENT BY MR. STRAUSS

SBUA views the new proposed decision as an improvement. However, four elements require revision.

First, payback period. The PD metrics show small commercial customers obtaining a simple payback period of 7.5 years in SDG&E's territory and 8.1 and 9.38 in the remaining IOU territories, with small commercial customers solar plus storage systems offering a faster payback ranging from 5.8 and 7.49 years depending on the IOU.

SBUA presented compelling national data that a payback period less than 7 years would result in systems being unaffordable for small commercial customers and the PD should be adjusted so that customers in all IOU territories can participate.

Second, The PD provides residential customers a 9-year ACC lock-in period aligned with their payback period. In contrast, small commercial customers are provided only a 5-year ACC lock-in period, far below their payback period.

According to page 25 of the Lookback Study, hardly any nonresidential systems are being installed. A shorter lock-in period offers small commercial customers with less certainty and, combined with their need for shorter payback periods, will likely lead to most small businesses being economically excluded from the NEM market.

Third, SBUA previously argued that NEM battery systems should be allowed to be charged from the grid to minimize peak demand and increase reliability of solar systems. We're not aware of any party opposing SBUA's proposal and SBUA requests that the PD section 8.5.3 include clarification that grid charging is allowed.

Last, the PD allows the legacy lock-in for residential customers to be transferred and continued by legal partner of the original customer. This should also apply to small commercial customers that are often involved in complex partnerships. The same attestation for legal partners that applies to residential customers should also be available to small commercial firms that can demonstrate the account is being transferred in a business partnership that existed at the time the system was installed.

I look forward to the Commissioners' questions. Thank you.

ALJ HYMES: Thank you.

Next up, we have Sean Gallagher.

MR. GALLAGHER: Thanks, your Honor. Can you hear me?

ALJ HYMES: Yes.

ARGUMENT BY MR. GALLAGHER

Thank you. Good morning, your Honor and Commissioners. I'm Sean Gallagher, Vice President of State and Regulatory Affairs for the Solar Energy Industries Association, the national trade association representing the entire solar and storage industries from small business owners to large, publicly traded companies.

As an initial matter, I want to emphasize that the proposed decision's determination to reject levying fees on customers merely because the customers installed solar on their homes is absolutely the correct call. Imposing such fees would have been unprecedented, unsubstantiated, and likely unlawful.

The same is true for the PD's

determination not to impose charges on behind-the-meter consumption.

The industry also supports the PD's move to a net billing approach. We believe that under the circumstances found here, it's appropriate in California to transition away from full retail rate net metering.

That said, SEIA is concerned about the sufficiency of the mechanism afforded to the industry to transition from stand-alone solar to solar plus storage as its primary product.

The PD finds that the inclusion of a glide path is essential to the sustainability of the industry and adopts a form of glide path, the ACC adder, which benefits stand-alone solar more than solar plus storage in order to afford the necessary transition. But the adopted ACC adders are negligible, creating an initial step-down that is overly steep.

As I noted in my testimony in this case, other states that have implemented a similar cliff in the export compensation rate have seen sharp declines in the pace of solar deployment. A similar decline in California would be counterproductive since a viable solar market is critical to making the necessary transition to storage.

The Commission should reconsider the adder levels, particularly for the initial step-down.

SEIA is also concerned regarding the short shrift which the PD gives the commercial and industrial sector, most notably agriculture, schools, and other public facilities.

The PD does nothing to ensure that this segment of the market will continue to grow sustainably.

It provides no transition for this market segment and affords this sector of customers only a five-year locked in period.

Given the size and costs of these projects, an accurate determination of the value proposition is critical in order to achieve the necessary financing. Such can't be done when the export compensation fluctuates after five years.

So the Commission should consider a more reasonable locked in period for the C&I sector.

And finally, SEIA believes that the PD does not go far enough to enable solar and storage for low-income customers. The long-term success of clean energy depends on delivering its benefits to all customers. We echo the comments of Vote Solar regarding the low-income sector. Thank you.]

ALJ HYMES: Thank you.

Next is Matthew Freedman.

ARGUMENT BY MR. FREEDMAN

Thank you. Matt Freedman on behalf of The Utility Reform Network.

We are disappointed with the new proposed decision because it represents another missed opportunity.

The PD's core flaw is its failure to reduce solar tax, and by the solar tax, I mean the rapidly growing portion of retail rates that all customers pay to subsidize participants in the net metering program. Record evidence shows that the annual cost shift associated with the legacy net metering was 3.4 billion dollars in 2021. But since 2021, retail rates and customer rooftop solar installations have risen significantly, and the cost shift now exceeds 4 billion dollars per year, which is three to four times the cost of the entire CARE program and more than 10 percent of all the rate revenues collected by the Three Investor-Owned Utilities. The cost shift is poised to grow substantially in the coming years under the modest reforms in the proposed decision.

And despite confirming that the current policy is manifestly unfair to nonparticipants, the new proposed decision fails to offer a meaningful course correction. It endorses the use of quickly escalating retail rates to compensate a large portion of behind the meter production. It provides unjustified subsidies for exports and raises customer rates to cover this additional cost. It does not tackle the growing cost work associated with legacy net metering, and as a result, the new tariff is not scalable to accommodate significant increases in participation without creating massive rate distortions over time.

Additionally, the proposed decision does not account for key developments that will shorten the payback period for new rooftop solar customers. The modelling in the PD does not consider the 900 million dollars from the state general fund to incentivize new solar plus storage for low-income customers and new storage for higher income customers. It doesn't consider the full impacts of new and expanded federal tax credits especially for leased systems, and it assumes a 4 percent average annual rate escalation which determine the credits for self-consumption, but this is inconsistent with other Commission analysis --

(Off the record.)

ALJ HYMES: We'll be back on the record.

While we were off the record, we discovered that our court reporter had lost connection. So we are going back to a prior speaker.

Mr. Freedman, please proceed.

MR. FREEDMAN: Thank you, your Honor. Where we last left off in the record, I was noting that the proposed decision does not account for key developments that are going to shorten the payback period for new rooftop solar customers. And one of the assumptions in the PD that is wrong is it assumes a 4 percent average annual retail rate escalation, and these rates will determine the credits for the self-consumption. But this 4 percent assumption is not consistent with other Commission analysis that projects annual rate increases of up to 9 percent. Bigger future rate increases will shorten solar payback periods and increase returns for solar customers.

Finally, reforming net metering has no impact on California's decarbonization objectives. State law requires a transition to a zero carbon electric grid in approximately two decades with aggressive interim targets. The question is not whether we are going to decarbonize the grid. It's how we're going to get there, how much it's going to cost and who is going to pick up the tab.

Thanks for the opportunity to present today.

ALJ HYMES: Thank you.

And let's go back to Mr. Constantine.

ARGUMENT BY MR. CONSTANTINE

And I will start from the top. Sorry to repeat. Good morning, Commissioners and Judge Hymes. My name is Sachu Constantine. I am the executive director of Vote Solar. We are a national nonprofit advocacy organization working to ensure a clean energy future powered by solar that is just, equitable and accessible to all and where distributed energy resources play a key role in bringing down the cost and ensuring the reliability of that future clean energy portfolio.

While acknowledging, as others have, many of both the positive and problematic aspects of this decision, at a high level, we want to emphasize the need for a course correction to properly serve disadvantaged communities and families and point to some possible improvements with respect to serving all customers and our clean energy future.

First of all, the definition of low-income eligibility is too restrictive as CARE and FERA are underutilized and do not capture the full array of low-income and otherwise disadvantaged households. By some estimates, more than 2 million customers are below 80 percent of area median income and are not currently on CARE or FERA.

The dollar-per-watt installed cost of solar is too low as others have noted. The state's own disadvantaged communities and single-family affordable solar homes data shows the real cost of these households is $4.28 per watt installed rather than $3.30 used here. This would have a significant impact on the current payback periods or corrected adders.

The equity fund was a great idea included in the last proposed decision but has now been punted to an uncertain future that will depend on a broad array of demands on the SGIP program moneys and further deliberation and approval are subject to the legislature.

We also have some concerns about the ability of institutions that serve disadvantaged communities, like churches and schools, being able to affordably access rooftop solar in the new commercial paradigm. We echo SEIA's concern and feel a longer lock-in of the ACC for commercial customers would be a big help and also inclusion on the ACC plus.

As for the broader market, we do support the rejection of any punitive solar fee or tax including leaving behind-the-meter consumption alone as good principles dictate. We are positive about the protection for legacy customers and the use of TOU rates, good time-of-use rates or the right signals are sent. We will seek a smaller first step, as others have noted in the glidepath, to allow for an orderly transition from solar only to solar storage and the inclusion of those realistic installed costs to calibrate ACC plus adders. We really, beyond that, would like to uplift the comments of SEIA, grid --

(Timer notification.)

MR. CONSTANTINE: -- filing more details in writing. Thank you.

ALJ HYMES: Thank you.

Next up is Bill Allayaud.

(No response.)

ALJ HYMES: Mr. Allayaud, we can't hear you. Check your mute button.

MR. ALLAYAUD: Can you hear me now?

ALJ HYMES: Yes, please proceed.

ARGUMENT BY MR. ALLAYAUD

Good morning, Commissioners and your Honor. I am Bill Allayaud, California director of government affairs for the environmental working group. The major utilities are in the business of selling consumers electrons, and their business model points them to utility-scale renewables and storage to meet their carbon reduction goals.

Therefore, rooftop solar on homes with accompanying battery storage as well as microgrids are seen as competition to that business model.

The PUC should be championing distributed generation instead of a NEM rate structure or excessive fixed charges that will discourage DG. The emphasis should be on keeping the cost of installing and operating rooftop solar as low as possible for everyone while finding ways to bring more low-income families into the program rather than configuring the program so that it discourages middle and higher income households from doing the right thing.

Finally, the PUC should recall that you were requested by 16 California congress persons in a recent letter to you to resist using the Landmark Inflation Reduction Act incentives for expanding solar as justification to impose drastic and immediate export rate reductions or discriminatory fees or which would stymie growth of the clean energy source --

(Timer notification.)

ALJ HYMES: Thank you.

And our last speaker is Charles Adams. Mr. Adams.

ARGUMENT BY MR. ADAMS

Charles Adams, Albion Power Company.

The ACC employs false values, we feel, to establish the worth of utility scale solar in the PD.

The ACC externalizes distribution costs and environmental destruction. It externalizes 60 percent of the cost of solar farms being bought as tax equity by the wealthiest one percent on Wall Street.

Two to five cents for solar farms is a post-tax shift number.

Local economies created by NEM generate local clean energy, local jobs, local tax revenue, equity and environmental preservation.

The ACC is a wealth shift away from local economies towards utility infrastructure projects and Wall Street tax credits. Somehow in your model a solar farm destroying virgin land in Canada counts as clean energy but a rooftop solar project in Oakland does not count, which makes no sense.

The ACC perpetuates economics where environmental assets are destroyed and called income without accounting for their permanent loss. Rooftop solar is undervalued in the ACC, and we feel the PD misses the point of most of the work we've done in the past 20 years.

Thank you for letting me speak.

ALJ HYMES: Thank you.

At this time, I want to turn to our Commissioners. We are running a little late. I just wanted to ask if there are any Commissioners that need to leave directly at noon and would like to move up in line?

Originally I had planned to have Commissioner Houck go first.

Is there anyone with time conflicts?

(No response.)

ALJ HYMES: Okay. Hearing none, Commissioner Houck, do you have any questions?

COMMISSIONER HOUCK: Yes. I have -- hopefully, we could get -- and the first question I'd like to hear specifically from the investor-owned utilities and ratepayer -- and it goes to equity. I think equity's been a major issue raised on both sides of this, whether it's cost shifting for disadvantaged customers or access to being able to have rooftop solar on their homes.

And so my question goes to whether the PD meets our ESJ action plan goals and that the prior decision looks at tariff benefits that went to disadvantaged communities and tribal communities, and the current proposed decision looks at customers that are enrolled in CARE/ESA, which could effectively exclude or create barriers for underrepresented populations and tribal members.

And so my question is whether -- and I think some of this was raised by Mr.

Campbell and Mr. Constantine -- whether the IOUs and ratepayer advocates have any perspective or opinions or whether it does, in fact, create barriers and may potentially exclude some underrepresented and tribal communities that may be bearing a disproportionate energy or economic inclusion burden in regards to energy use.

MS. PETERMAN: Sorry. Trying to get off mute. Commissioner Houck, this is Carla Peterman. Thank you for the question. I would just say I think it's a good question. We'll be happy to respond in more detail in our comments. Especially there was different equity programs that were proposed, as you noted, part of the record, now as being proposed by the Commission has addressed this through subsidies with SGIP. So I do think it's worth looking at if the structure in SGIP appropriately supports these communities.

And again, we do think that addressing the fixed charge in the next proceeding or this proceedings is going to be an important part on the economic side of equity.

ALJ HYMES: And can we have someone -- I believe the Commissioner wanted someone from Public Advocates to address this issue as well.

MR. BAKER: Yeah. Can you hear me?

ALJ HYMES: Yes.

MR. BAKER: Okay. Yes. I would just say as far as it goes, the PD does address --

ALJ HYMES: I'm sorry. Can you please identify yourself.

MR. BAKER: Matt Baker, director of the Public Advocates Office.

And we would argue that as far as it goes, the PD does address equity issues, and I would just say we would define equity issues -- or the most important equity issues is how can we get clean power at the lowest possible cost to the -- you know, to have the greatest penetration throughout the system. And so we're looking at it from that lens.

And to the extent that it addresses cost-shift issues particularly with new customers, it does so. And you know, we believe the Commission also has plans to address those issues, you know, through things like income-based fixed charges that would also help a great deal.

MS. TIERNEY: Judge Hymes, may I make an additional comment?

ALJ HYMES: Please identify --

MS. TIERNEY: Yeah. Sue Tierney from Analysis Group.

The only addition that I wanted to make is to say that the Inflation Reduction Act includes not only tax credits that are available for rooftop solar and storage, which are less helpful to low-income and disadvantaged communities by virtue of the fact that they may not have taxable income, the IRA also includes a greenhouse gas reduction fund substantial portions of which have to go to support clean energy investments in disadvantaged communities. So there are placed in that policy which will help advance these objectives in California.

Thank you.

ALJ HYMES: Commissioner Houck, any other questions?

COMMISSIONER HOUCK: Just -- our next -- other question is for Mr. Gong regards -- from or Aurora Solar. He mentioned that the new PD provides continually changing 576 different rates which complicates the issue for consumers, and I would just ask if he could explain in a little more detail his recommended solution, what he's proposing for the PD.

MR. GONG: Yes. We recommend following

an export rate that is adjusted to this -- to the avoided cost calculator following the time of use found in the otherwise applicable rate schedules. I believe --

(Reporter clarification.)

MR. GONG: We would recommend that the export rate be tied to the time of use of the otherwise applicable schedules that the customer is enrolled in, such as E-ELEC for PG&E and so forth. The export rate would be scaled to an average of some sort based on the ACC export, as CALSSA and SEIA have offered in their proposals and testimony.

COMMISSIONER HOUCK: Thank you. And Judge Hymes, I don't have any more questions.

ALJ HYMES: Okay. Thank you.

Commissioner Rechtschaffen.

COMMISSIONER RECHTSCHAFFEN: Thank you, Judge, and thank you to the parties for being remarkably succinct. I have two questions. The first is directed to Brad Heavner at CALSSA and John Gallagher at SEIA, and it deals with the payback period. And I just want to understand and situate your thinking on the payback period. In filings in this proceeding, counsel stated (inaudible) of seven-year payback's appropriate, nine years could be a backstop. And SEIA said we should have a 10-year payback for solar plus storage customers. The PD provides for nine years for standalone solar customers, seven years for solar plus storage.

My question is, between seven and nine years -- this is for you, Brad, maybe, but I want Sean to comment as well. How do we know -- on what do you base your assertion that that's very significant, that that will lead to, you know, undesirable market disruption?

And then the second question related to that. You heard a lot today about how the payback period is based on assumptions that may be unduly conservative. In particular, about rates, that rates may be unfortunately, because of inflation and other factors, escalating that twice the rate that's assumed in the PD. So given that, won't -- isn't there an argument that the payback period that will be much closer to where you'd like to go?

So maybe Brad, you could address the two question first and then Sean.]

MR. HEAVNER: Yes, thank you, Commissioner.

The -- the -- the biggest difference is being under water with a loan versus having loans be viable. The payback period and monthly savings from a loan are opposite sides of the exact same coin. You do something to improve payback, and you do something to improve -- it -- it also improves savings from a loan. So, nine-year payback -- the -- the conditions that would lead to a nine-year payback would lead to being underwater with a loan; and with seven years, it would not. Loans would be viable, and it's essential that we make loans viable for low- and moderate-income customers to participate.

One difference between the solar and the solar and storage model paid back by the E3 calculator is they're assuming an extremely sophisticated storage algorithm to maximize savings for customers that is really unrealistic in the short-term. It's something to aspire to in the long-term, but to be able to maximize minute by minute, the charge and discharge of a battery to maximize the customer savings is unrealistic in the short-term, so that -- that measured payback from storage and storage is -- from the user calculator is unrealistic. It's -- it's too low.

Those are very important points. Is

that -- is that enough to answer your questions?

COMMISSIONER RECHTSCHAFFEN: What about the rate escalations?

MR. HEAVNER: Well, it -- it is going -- I -- I mean, more than four percent rate escalation is something that we should work hard to avoid, and I think due to electrification, it should be avoidable. That we should be less than four percent and even negative. If we are -- are expanding the number of kilowatt hours that are purchased from the utilities that will push down rates, and I don't think assuming rate escalations higher than four percent is a good idea; and even four percent, I consider an upper bound.

COMMISSIONER RECHTSCHAFFEN: Okay, thank you.

Sean?

MR. GALLAGHER: Thank you, Commissioner.

First, I'll -- I agree with, essentially, what Brad said, and he is right that most -- most solar systems, even owned solar systems by customers are financed; and if you don't include the financing cost that is going to extend the payback period.

So, the -- we think the nine-year payback period that the PD shoots for is -- is about right; however, I note that the PD does assume solar costs are actually a little bit lower than what we're actually seeing in the market. In the last year and a half or so, we have seen solar cost increase as a result of supply chain issues primarily; and so -- so that's -- that is an issue, but I think the target is about right.

I would typ -- I generally agree with Brad on the -- on the issue of escalating of rates but the -- again, because the -- because the cost for solar that are assumed in the PD are a little less than actual, that is going to balance that out.

COMMISSIONER RECHTSCHAFFEN: Well, I would just say, of course, Brad, we want to keep down rates; and we're doing everything possible that we can. A -- a lot of it is out of our control. We don't control inflation, of course, but absolutely we -- we are not expecting them as -- as given.

I should also say, in response to what you said, Sean, we certainly hope, and I know the solar industry certain hopes, that cost of solar will go down; and that we can -- we should build in and just accept as a given that the cost keeps going up.

So, you know, that -- that can cut in a different direction as well.

Okay. I --

MS. PETERMAN: Commissioner Rechtschaffen?

COMMISSION RECHTSCHAFFEN: -- have one more -- excuse me?

MS. PETERMAN: Commission Rechtschaffen, this is Carla -- this is Carla Peterman. I just want to correct the record on one thing that Brad said.

The current calculation from the Commission assumes no escalation in rates, so he identified a four percent would be reasonable. There is no assumption of escalation of rates; and, in fact, the way that solar companies sell their products to their customers, they sell it on -- using an escalated payback. They focus on the fact that rates are going up; and so, really, it's important to be consistent with the practice of the solar industry and really where we're seeing rates go.

I appreciate the opportunity to offer that comment.

MR. HEAVNER: And when I say that seven-year payback is equivalent to being able to save money with a loan, I am talking about a simple payback. That is just the -- just the upfront costs, and the first-year savings.

The -- the PD rightly adopts that as the metric just because it's very straight forward and gets rid of these -- these assumptions that are controversial.

COMMISSIONER RECHTSCHAFFEN: Judge, do I have time for one more question?

ALJ HYMES: Yes, you may.

COMMISSIONER RECHTSCHAFFEN: Okay. This, again, is to you, Brad; and this is something that we've heard from CALSSA in the media. You didn't mention this directly here but I want to just ask you about it -- and if you don't want to comment about it, you don't have to -- but there's been a lot of talk about how the -- flaws in the decision because of a very steep drop in the export value; and I heard you -- I appreciate what you said that we need to move away from retail rates for the avoided cost calculator, but you -- there's been a lot of talk about how steeply that is going to -- the export rate is going to drop, and that will create too steep a change in year one for the solar industry; and the number -- that number, to me, seems to be misleading because it's only one-half of the equation. As we heard a lot of parties say here today, solar customers are net-billing tariffs saving a lot of their money -- most of their money by avoiding imports.

So, isn't the relevant figure one -- in terms of figuring out what the change in savings will be, isn't it one that combines both the decline in import and export compensation as well as one that it reflects import savings?

MR. HEAVNER: Absolutely. You need to look at the whole picture. But the -- the comments are based on the fact that when there's a 75 reduction in the export credit in day one that, as part of the whole, is too much. It's too much of a shock, and I don't think it's too much to ask for that to be a little smoother.

We're not saying straight line from current savings to future end stage, but less of a steep drop in stage one.

COMMISSIONER RECHTSCHAFFEN: Thank you.

MR. GALLAGHER: That's really the correct approach.

COMMISSIONER RECHTSCHAFFEN: Thank you, Judge.

ALJ HYMES: Let's move on to Commissioner John Reynolds.

COMMISSIONER JOHN REYNOLDS: Thank you Judge Hymes.

I have a question for Mr. Heavner that maybe follows nicely on Commissioner Rechtschaffen's question.

I will be focused on the export side here. Mr. Heavner and, perhaps, Mr. Gallagher or Mr. Constantine would also like to speak to this, because I've heard similar things from them, you know, thinking about a phase in of the export transition.

As you're well aware, electric rates in California are generally volumetric. The costs are recovered in the retail rates, not just the cost of power purchased by a CCA or a utility; and those include, of course, costs like utility lineworker wages, costs for utility poles and wires, wildfire mitigation costs and many others.

When you propose a phasing in of an ACC rate or a rate similar to the ACC for solar customer exports, are you suggesting that it's fair for non-solar customers to effectively pay solar customers a rate that includes these types of grid costs for the distributed energy production, and how would you propose that we justify that to non-solar customers?

MR. HEAVNER: Well, I think it's important to have a long-term view. The -- if we decimate the ability to install clean energy in communities where we're going to be adding loads and electric vehicles that will hurt us in the long run. We are heading towards 100 percent clean energy. That is going to be very difficult. If we think it's going to be cheaper and easier to do it all with large-scale power plants in the desert and new transmission lines, we're kidding ourselves. It's just not right; and so, there is savings to be had in the long run. If we don't -- oh, I -- I don't want to get to the place 10 years from now when we look back and we're behind on our greenhouse gas goals and the cost of large-scale renewables has gone a lot higher, and we're kicking ourselves for having partially wasted the previous 10 years; that is what I am trying to avoid.

MR. GALLAGHER: Commissioner, the Commission should be guiding by the statute that includes both cost effectiveness test and sustainable growth; and so, that's the balance that you're trying to strike or should be trying to strike, and as Brad says, we don't want to shoot ourselves in the foot in the near-term to avoid progress that we need in the longer term.

MR. CONSTANTINE: Commissioner, I -- I don't think I can add anymore eloquence than -- than Sean or Brad already have. Also, we're taking the long view. It is our -- it is our position that this framing, the -- the massive cost shift is in and of itself flawed, in that as Brad points out and Sean points out, the sustainable solar industry is key to reducing the cost of the future energy portfolio.

Our modeling shows that there are tens of billions, if not hundreds of billions of dollars at stake in the cost of that future portfolio. Optimizing the cost of transmission, optimizing the development, sustainability and reliability of our distribution system. All of that is what is on the table here, and we feel that a -- a gradual smooth transition of ensuring the growth of the solar industry, while moving to an ACC putting with time-of-use rates that is the appropriate path, and we think a steep cliff is probably not the -- the best way to start off on that -- on that ride.

COMMISSIONER JOHN REYNOLDS: I appreciate --

MS. PETERMAN: Commissioner Reynolds, this is --

COMMISSIONER JOHN REYNOLDS: -- that --

MS. PETERMAN: Commissioner Reynolds, this is Carla Peterman, can I add one comment on the question?

COMMISSIONER JOHN REYNOLDS: Please, go ahead.

MS. PETERMAN: What I didn't hear at all today is the solar industry's openness and willingness to pay any fixed charges, and that is a big part of the proposed decision is to have that conversation as part of the demand flexibility rulemaking.

In fact, just yesterday, the solar party's in an Edison advice letter said they should not pay the wildfire securitization fixed charges even though -- the non-bypassable charges -- even though the Commission ordered that in a decision.

So, I thought your question was really getting at, at what point do NEM customers pay any fixed charges, and I would be interested in knowing if they're willing to say today that they would be open to an appropriate fixed charge as a part of the

flexibility rulemaking?
MR. HEAVNER: The proposed decision accurately portrays our position that we think it's better when addressed to all residential customers, and we will be supportive of that in the demand flexibility rulemaking.
MS. PETERMAN: I --
MR. GALLAGHER: We propose -- we proposed -- we propose for the use-solar customers to honor these electrification rates. We do have fixed charges.
MS. PETERMAN: Interesting. I find that very inconsistent with your filings in other proceedings, but I appreciate you clarifying that today.
ALJ HYMES: Commissioner Reynolds, do you have any follow-up questions?
COMMISSIONER JOHN REYNOLDS: I would like to briefly follow up with Mr. Heavner, who I will ask to lead the way, and then I have one additional question that will be relatively brief, I think.
I can appreciate the desire not to have a quick transmission to a different export compensation model.
I'm understanding you to be saying today that you think that there is

justification to move to a different export compensation model, and I would like to hear from you what -- what you think we should be telling non-solar customers about what justifies raising in that better export compensation model as opposed to moving to it right away?

MR. HEAVNER: We really don't think there is objection to this concept. When we talk to -- so, customers -- individual Californians all over -- we have polled on this, we have had meetings, we have done all sorts of interaction with the public. People want more solar. People think it's crazy that we would pull back support for solar energy even if it is a subsidy.

I don't think that there is explaining that needs to happen. People want you to support more solar in California.

COMMISSIONER JOHN REYNOLDS: Thank you. I will switch gears. I have a brief question for Dr. Peterman.

I want to make sure I understood one of your suggestions correctly. When -- I think you indicated that NEM 1 and NEM 2 customers should not transition at the end of their tariff period to a tariff with a subsidy.

Is it your position that those customers should not transition to the net-billing tariff NSB?

MS. PETERMAN: It is, Commissioner Reynolds, because as it stands right now, the Commission's PD acknowledges the net-billing tariff does still include the subsidies, and we don't think that is appropriate for NEM 1.0 and NEM 2.0 customers.

A challenge is, there is not a no-subsidy tariff yet to transmission them to, so the Commission could consider a track to establish that or to be a part of the demand flexibility OIR.

For an easier fix right now, it should say that when NEM 1 and 2 customers go off of their current tariffs that they're not exempted from non-bypassable charges. That would go contin -- that would go further but, ultimately, yes. We think right now, you default them here, it still gets a significant subsidy.

COMMISSIONER JOHN REYNOLDS: Thank you.

I will turn it to back to you, Judge Hymes.

ALJ HYMES: Okay. Thank you, next up is Commissioner Shiroma.

Do you have any questions for our panelists?

COMMISSIONER SHIROMA: Yes. Thank you, Judge Hymes. I have one question.

And my question has -- I will -- I will name who I -- I will be choosing who -- to respond to my question, but it has to do with the $900 million for a new storage incentive program, and 130 million of which is reserved for low-income disadvantaged communities; and my question is going to be for Roger Lin with Center for Biological Diversity, Matthew Freedman with TURN, and Dr. Peterman with PG&E and -- and Dr. Peterman, I harken back to your days as a CPUC Commissioner -- presiding as a Commissioner instrumental on the advancement of storage.

I -- so, here is my question to the three of you: you -- do you foresee that if -- $900 million is a lot of money, but the price of storage is such that this will only go so far. But it does -- that the proposed decision does provide for an infusion of effort and resources into low-income communities. Overall, do you -- do you foresee -- and if you don't know the answer to this question, that's fine.

Do you foresee that this infusion of monies, and, particularly, for the lower-income communities, has the opportunity to bring the cost of battery and storage down towards advancing the opportunity for further -- further opportunities for homeowners and commercial customers to invest in -- in storage.

Who wants to go first?

MR. LIN: I have two quick responses to the Commissioner's -- for the questions.

The first is just echoing the comments from GRID Alternatives that there's no assurity -- there's no certainty that the 900 million will be benefitted, so that's first point.

The second point is this proceeding is -- it really shouldn't only be about barriers. Like, why aren't there more renewable resources or clean energy resources in disadvantaged communities than ESJ communities? The prior equity fund was going to be informed by collecting environmental justice voices to see how that money in the equity fund could best be spent. We cannot compare funds for storage only to overcoming those barriers with input from environmental justice stakeholders, so it really does all come down to barriers. If we have less barriers, we have more clean energy resources in the ESJ communities, and the alleged cost shift would become the -- that argument would become even clearer if access was resolved; and barriers, again, really is the issue that we have to address.

COMMISSIONER SHIROMA: Thank you, Roger.

MS. PETERMAN: I am happy to -- I am happy to go next Commissioner Shiroma, if Mr. Freedman is okay with that.

First of all, I will say that, I think the infusion of dollars from the legislation and taxpayers is appropriate. We do want to be funding these programs with taxpayers so that everyone pays. When we do them as ratepayer, customer-funded programs, as we talked about a lot today, there are customers including NEM who end up being not actually being a part of that funding.

I -- I think it's great what the legislature has done, and I applaud the proposed decision for dedicating 70 percent of the funding to low-income communities.

I do think all -- all of plans of storage help lower the costs, but there are also other things that are driving down the cost of storage. There is increasing improvement around battery development. There is improvement in integration.

So, regardless, we are going to see the cost of distributed storage go down but again, I do think this helps make it more available.

I would encourage the Commission as a part of SGIP to look at, though, how do you make sure this really gets to disadvantaged communities, and how do you make sure that whoever gets it are able to participate and provide grid services. Distributor storage right now is at a private benefit. If we wanted to have true grid benefits, we have to make sure we've got the right pricing signals, and that we're really think about as well targeting areas where it's needed for resiliency or there is some capacity constraints.

So, I think there's an opportunity here for the Commission to further lean in into the SGIP proceeding review of this.]

MR. FREEDMAN: Matt Freedman here with TURN.

TURN for many years has been urging the Commission and the legislature to look at alternative sources of funding to support many of these public purpose initiatives. We've pointed out -- and it's uncontroverted -- that the collection of these types of costs and rates is extremely economically regressive.

The way to spread these costs in a progressive manner is to collect them through sources outside of rates and particularly through income taxes. This year the legislature responded with an historic set of appropriations for climate and clean energy, almost $8 billion.

The fund that's identified in the PD is one of those spending initiatives. And hopefully it will be used to provide up-front buydowns for these systems.

Low-income customers face barriers to access in capital and getting financing. The very most valuable money that they can receive is an off-the-top rebate up front. We think that these funds can provide that exact type of benefit, and we think they can go a long way towards encouraging the deployment of both solar and storage for low-income customers.

Over the longer term, we expect storage to get cheaper, in particular because of the huge amount of federal government support for the storage industry, the manufacturing, and other elements of the supply chain, along with tax incentives that are going to bring down the cost of storage over time and make it easier for customers to adopt it.

We will continue to argue in front of every forum for additional funding to support these initiatives coming from sources outside of rates, and we think that should be the focus paired with a rational net billing tariff that does not shift costs to nonparticipating customers, specifically the least vulnerable customers out there who are facing a crisis of affordability today. Thanks.

COMMISSIONER SHIROMA: I think you meant the most vulnerable customers.

MR. CAMPBELL: Commissioner Shiroma, this is Stephen. May I ask for a quick response, very quickly?

COMMISSIONER SHIROMA: Okay. Who's speaking?

MR. CAMPBELL: Stephen Campbell with GRID Alternatives.

COMMISSIONER SHIROMA: Oh, yes. Certainly.

MR. CAMPBELL: Just really quick.

Thank you very much.

I would say regarding SGIP, it's a market transformation program. It's not a low-income program. So even though it's great that the majority of money is in -- in market -- was reserved for income-qualified customers, there's still barriers that a market transformation program will have difficulties being successful with, primarily marketing, education, and outreach.

That is a main very, very critical component of low-income programming because that is a very large cost of any install, dollar-per-watt, customer acquisition, especially the hard-to-reach communities across a very large state.

This is a critical path that the Commission really does need to figure out how to fund ME&O in a market transformation program if that's available, otherwise we worry that the money, while it's great, well-intentioned, could sit there or maybe go to the wrong customers as it did in the last round. Thanks.

COMMISSIONER SHIROMA: Thank you.

Thank you, everyone.

ALJ HYMES: Commissioner, do you have any further questions?

COMMISSIONER SHIROMA: No. Back to you, Judge Hymes. Thank you.

ALJ HYMES: Okay. Thank you.

Then finally, the assigned Commissioner, President Reynolds.

PRESIDENT REYNOLDS: Thank you, Judge Hymes. I do have a few questions.

The first one is for Susan Tierney. I think I heard you correctly in noting that the five-year glide path that is proposed in the PD is very long, and so I wanted to ask about the proposal for a glide path in the form of ACC Plus that lasts five years for new customers and would be stepped down 20 percent per year until they've reached the APC amount.

Could you just elaborate on why you think the five-year time period is too long and the length of time for allowing the industry to transition, while also taking into account the need to control costs. I just wanted to hear a little bit more about that. Thanks.

MS. TIERNEY: Thank you for that question. My earphones have run out of juice after this time. Can you hear me okay?

PRESIDENT REYNOLDS: Yes.

MS. TIERNEY: Okay. A couple of

reasons; one, as we know, the net metering program has been in place for 25 years. In some sense, there is a lot of history in the transition that has been under way. So extending a number of years beyond this really is icing on the cake in some sense because people have been on notice there need to be reforms and that there are costs that are being borne by nonparticipants.

Second, I think the glide path is long in light of the -- the discussion that was just under way about the assumptions in the avoided cost calculator and how they are conservative in light of the assumptions about electricity prices not going up in California.

They are also not inclusive of the kinds of financial incentives that one would expect to be in place as a result of not only California's taxpayer-funded incentives, but also federal incentives for tax credits for investment in solar and storage.

As I mentioned very briefly, the new Greenhouse Gas Reduction Fund that is funded by congress and that is separate from the tax credit program is one where there will be $27 billion invested across the country in terms of helping to accelerate investments that -- and grants in some sense -- for a significant portion of the country's disadvantaged and low-income consumers in adopting things like rooftop solar, energy efficiency storage, and other things.

So there are a number of things -- ways in which we have these external things happening that will contribute to having a relatively promising payback period for solar customers without such a long payback period.

So I hope that that's responsive and I'm happy to add to that in comments, in written comments.

PRESIDENT REYNOLDS: Thank you. That's very helpful.

I have a question now for NRDC and, again, further elaboration on statements that you made in your comments. What I heard is a reference to the proposed decision furthering decarbonization goals by including -- encouraging customers to adopt electric vehicles and appliances.

Could you talk about what you anticipate the effects will be of the proposed decision on greenhouse gas emissions and other environmental outcomes, so a little bit more on environmental benefits of the proposed decision.

MR. CHHABRA: Thanks for asking that question, Commissioner.

So the first part of my comment was the new proposed decision's impact on mitigating cost increases will make it easier for the state to decarbonize. The reason is that we need affordable electric rates in the absolute for decarbonization to be affordable because customers who electrify should pay less on their electricity bills than the energy bills of today.

Second, electricity consumption rates need to be cheaper than gasoline and natural gas.

That's the overarching concern about rates from a broader decarbonization perspective. Because everyone can't get rooftop solar, the majority won't be able to, we need rates for them to be kept in check.

Now, secondly, the fact that this new net billing tariff encourages storage by providing higher compensation for self-consumption, especially in the evening, that means that customers will use onsite energy and self-consume it at a time when the grid is most strained and polluting resources are most at the margin.

So these things combined make net

billing tariff better aligned than our broader decarb goals. And our hope is that further reform to rates through the rate's flexibility proceeding will bring retail rates where they need to be to get to our broader goals.

Does that help?

PRESIDENT REYNOLDS: Yes, very much. Yeah. Thank you very much.

MR. CHHABRA: Thank you.

PRESIDENT REYNOLDS: Now I wanted to ask a question to Matt Baker from the Public Advocates Office and potentially Dr. Peterman if she has anything to add.

I'm interesting in hearing a little bit more about the need to encourage electrification and encourage customers to use price signals to align solar and battery storage with grid needs. We heard today that there may be some difficulty in programming batteries too quickly to make sure that they're working at the right time and that our signals are actually being taken into account so that batteries do support grid needs.

I was wondering if you wanted to respond to that comment and also, in particular, ask if you're supportive of the movement to electrification rates that are a part of the proposed decision and a component -- really a component that was meant to bring the net billing tariff in line with our modern grid.

So if you could elaborate a little bit more on those points. Thank you. And starting with Mr. Baker.

MR. BAKER: Thank you, President Reynolds.

I'll take the question kind of backwards in that we do think the movement to electrification rates does help those for costs, reliability, and for the reasons that, you know, NRDC outlined also for climate benefits. We think that is an important part of the decision.

And, you know, over time we'd like to see everyone, you know, move into that, you know, move into that rate cost. I will have to confess that we will need to do a little bit more analysis on the, you know, on the assertion that it will be difficult to program batteries for this, and I think we could look for a more -- a better answer from me on that in our comments. Thank you.

MS. PETERMAN: President Reynolds, thank you for the opportunity to offer comment on this.

First of all, we know that batteries now can respond to time-of-use pricing, and the pricing that's proposed in the decision is hourly. Those ACC prices will be known in advance. I think the comment that you heard from solar -- it might have been Brad -- talked about a minute-by-minute response. That's not what's expected or anticipated with this rate.

So based on what I know at this point, batteries should be able to respond and we can expand upon that in comments.

To the second -- well, the other part of your question around support for electrification rates, we very much support having an electrification rate and appreciate that.

I think one of the challenges is it only relates to the import, and so we want to make sure that it's important still to have the fixed charge because otherwise you're still not capturing a lot of the clear grid charges that other customers are paying for.

And to be really clear, we're very supportive of a fixed charge for all customers. We think that is an appropriate direction for the Commission to go so we're supportive of that rulemaking and that examination. We want to make sure as we do that for all customers, that NEM customers are a part of that solution as well.

MR. HEAVNER: President Reynolds, can I clarify the comment on battery programming?

PRESIDENT REYNOLDS: Sure. Please go ahead.

MR. HEAVNER: Yeah, Brad Heavner, CALSSA.

The point was just that the E3 model is overly aggressive in calculating payback periods. It's absolutely true that batteries today could be programmed ahead of time on an hourly basis or a time-varying basis based on rates that you publish. So I would expect that would be the response from this PD.

We'd look a year in advance and program a battery every day, here is when it's going to discharge during certain hours or time periods.

What the E3 model assumes we can do is actually follow load and export only when the load is zero within a billing interval. So actually having measurement to say, "Here is a minute when the customer is not using energy, I'm going to discharge the battery then and export for during a high-value hour."

That's not really necessarily good for the grid, and it's not something we should expect them to be capable of right away. It's just a matter of the payback measurement in the E3 calculator was the comment.

PRESIDENT REYNOLDS: Okay. Thank you for the clarification. That's helpful.

Judge Hymes, I have no further questions.

ALJ HYMES: Okay. Thank you.

Thank you, everyone. I just want to give you all a reminder that opening comments on the proposed decision are due on November 30th and replies are due on December 5th. And, again, the proposed decision is currently scheduled to be considered by the Commission on December 15th.

I wanted to also ask are there any procedural questions from the parties? If there are procedural questions, please raise your hand.

Mr. Belur.

MR. BELUR: I apologize. That's not a hand raised.

ALJ HYMES: Okay. Thank you.

I see no other hands. Are there any questions from the Commissioners?

MR. BOYD: Your Honor?

ALJ HYMES: Yes.

MR. BOYD: Your Honor, I have a question, a procedural question. Will there be a transcript available for this argument to the parties?

ALJ HYMES: I believe that the reporters had put out an opportunity to request that transcript. I do not know if that -- if anyone has requested it.

MR. BOYD: Okay. Well, I'd like a transcript if it's possible before the comments are due. That would be helpful.

ALJ HYMES: Thank you. I will ensure that you receive the e-mail for that.

MR. BOYD: Okay. Thank you, your Honor.

ALJ HYMES: You're welcome.

Are there any other questions from the Commissioners before we end for the day?

(No response.)

ALJ HYMES: Hearing none, then we've completed our itinerary for the day. Again, thank you all for your participation. Thank you to members of the public who have joined us. There being no further business before the Commission, we are adjourned. We'll be off the record. Thank you again.

(Whereupon, at the hour of 12:26 p.m., this matter having concluded, the Commission then adjourned.)]

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